

AMSAT OSCAR Eagle



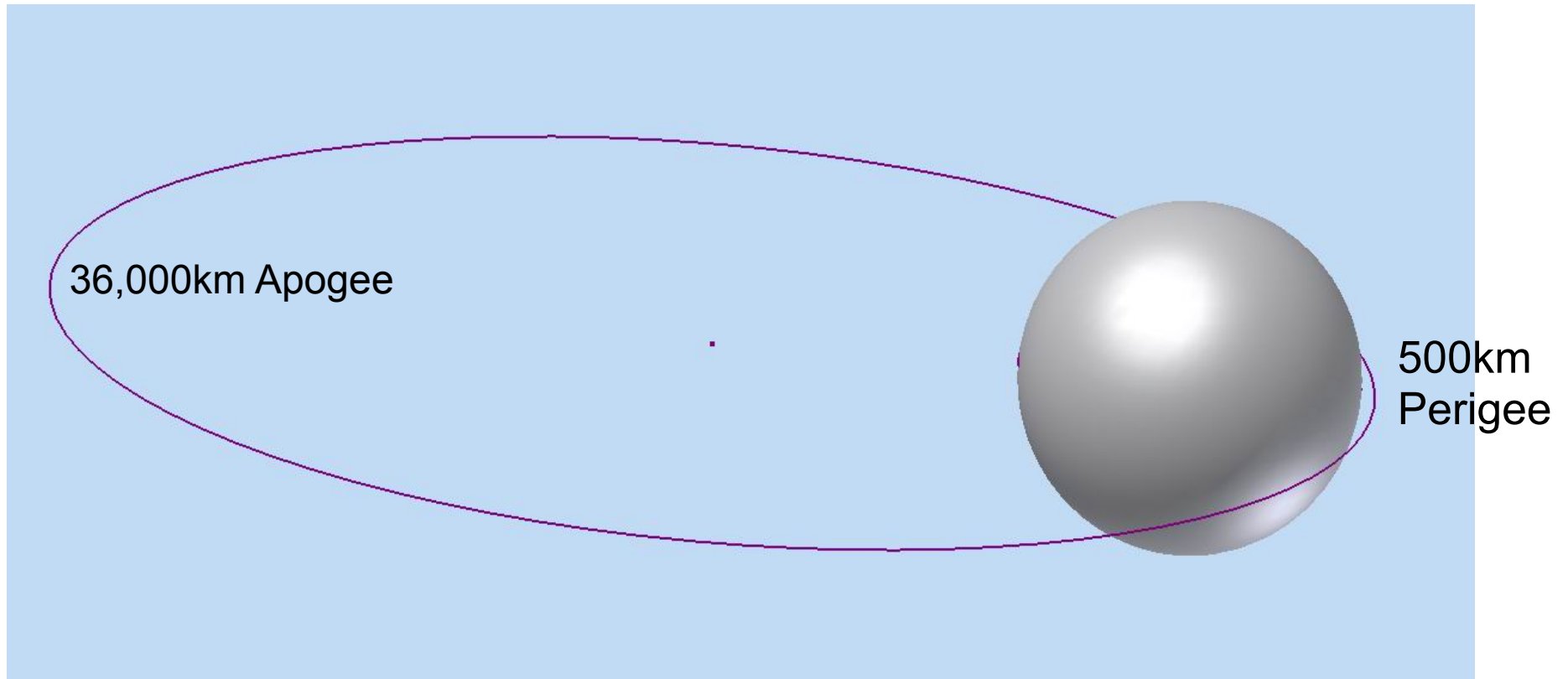
A Review of the Mechanical,
Thermal, Power, & Attitude
Control Designs

AMSAT 2004

Vision & Mission Statement

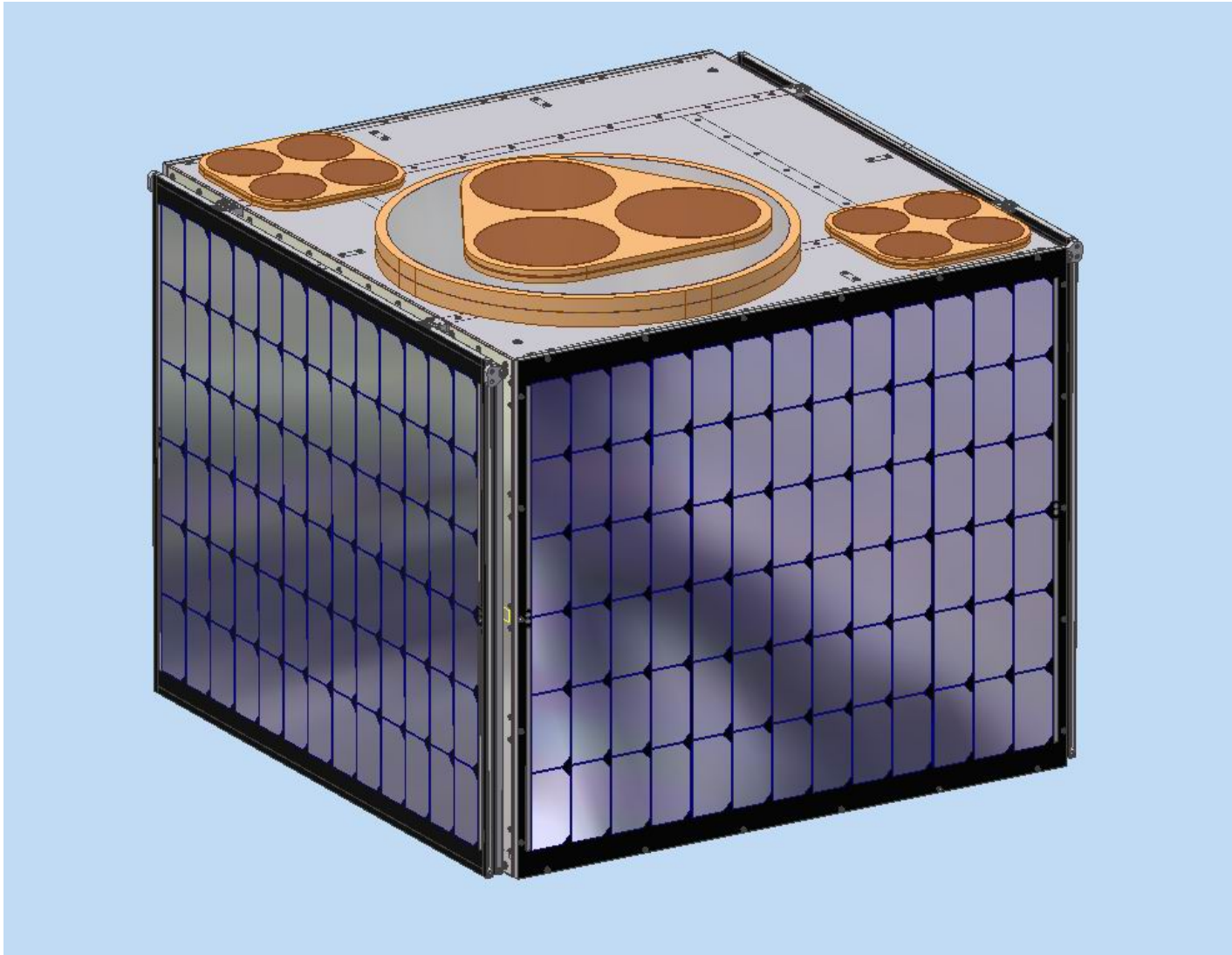
- Eagle - Second of Three HEO Satellites
- Daily Coverage Anywhere in World by 2009
- Third Satellite for Continuous Coverage by 2012
- Encourage Technical & Scientific Innovations
- Promote Training & Development of Skilled Satellite & Ground System Designers & Operators

Eagle Orbit Diagram



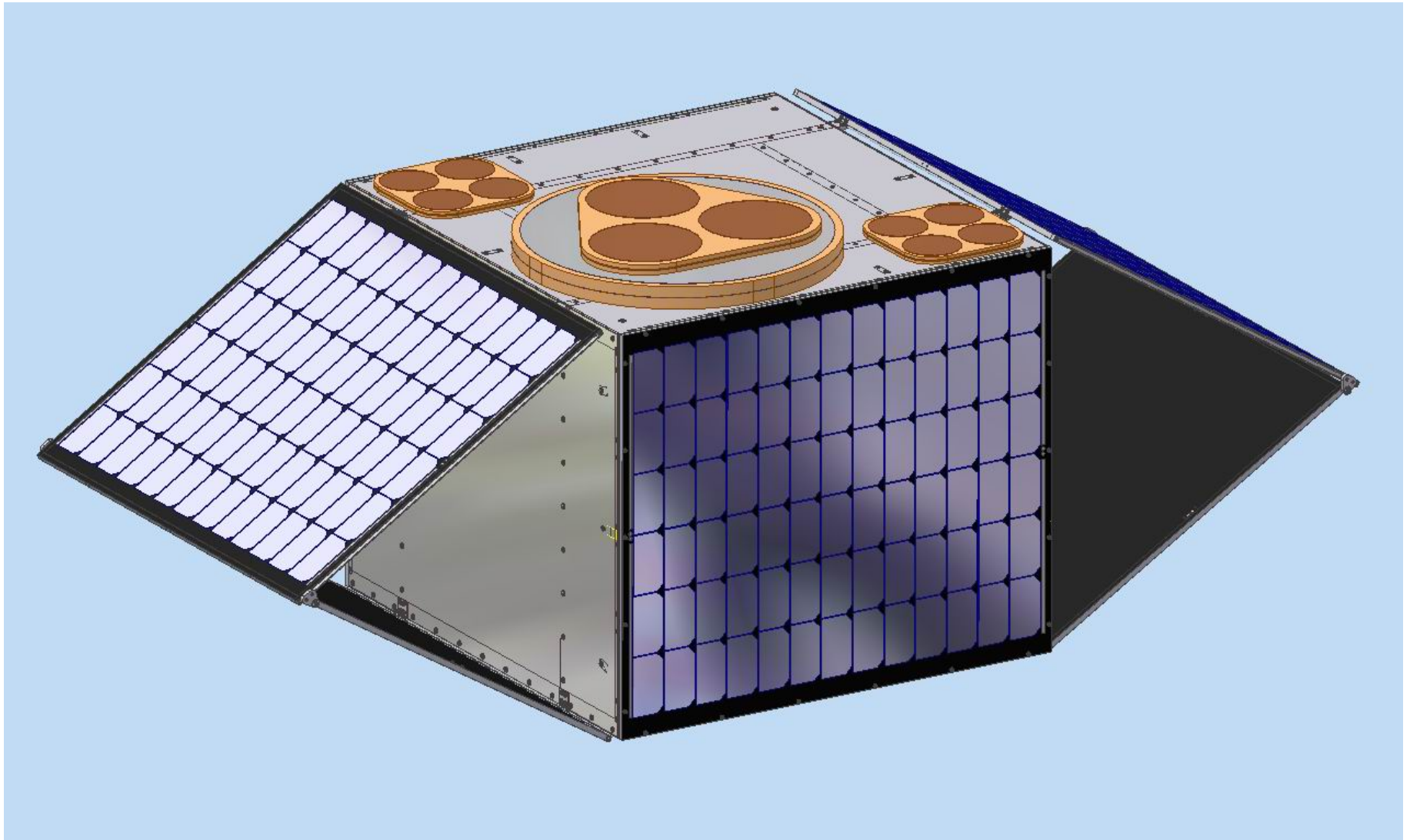
With an initial GTO launch perigee of 200km, it is very important to get an apogee burn within 10 days to lift perigee to 500+km for a long life orbit.

Eagle in Launch Configuration

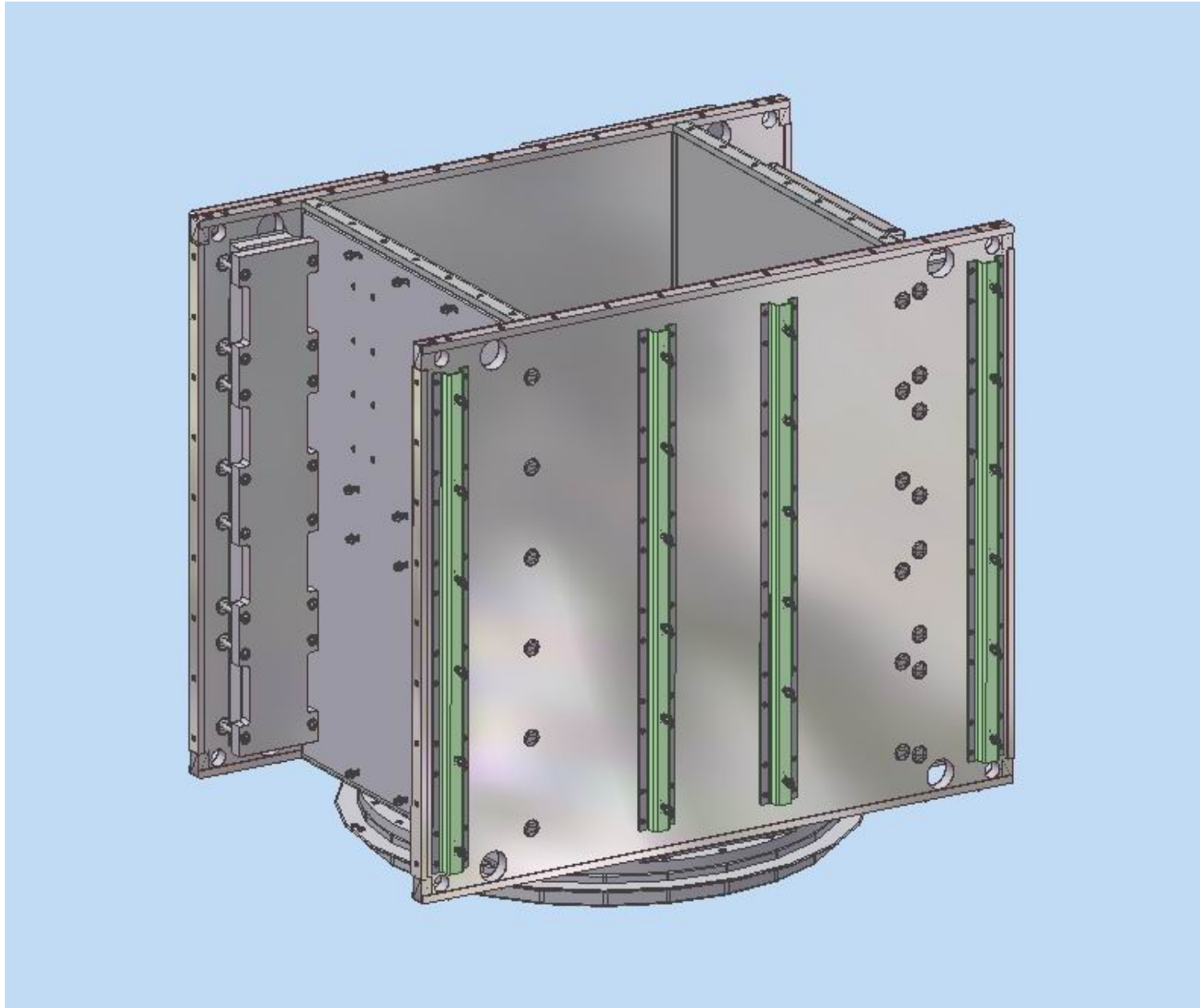


Eagle in Orbital Configuration

Showing Y-Side Solar Panels Deployed
& Antennas on +Z Side

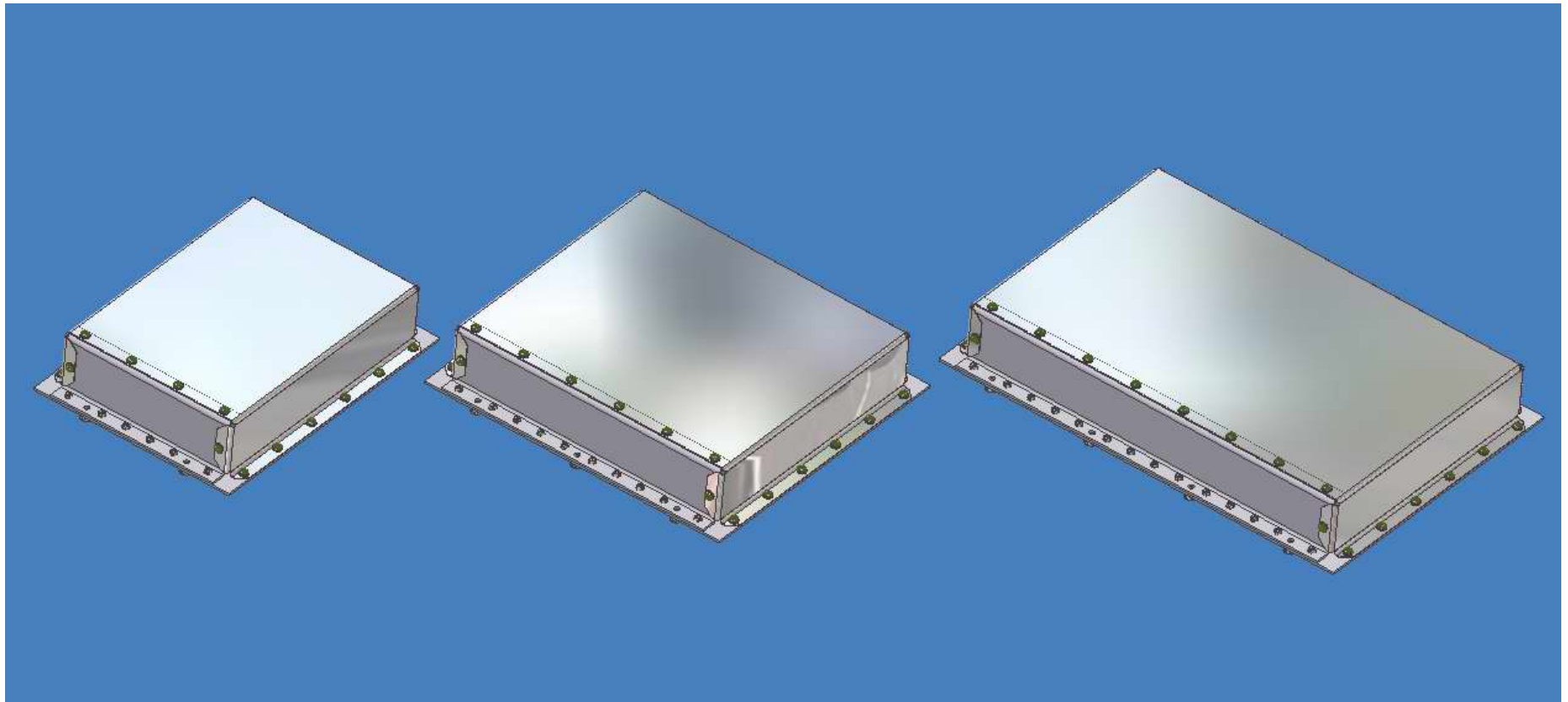


Eagle Honeycomb Panel Core Structure

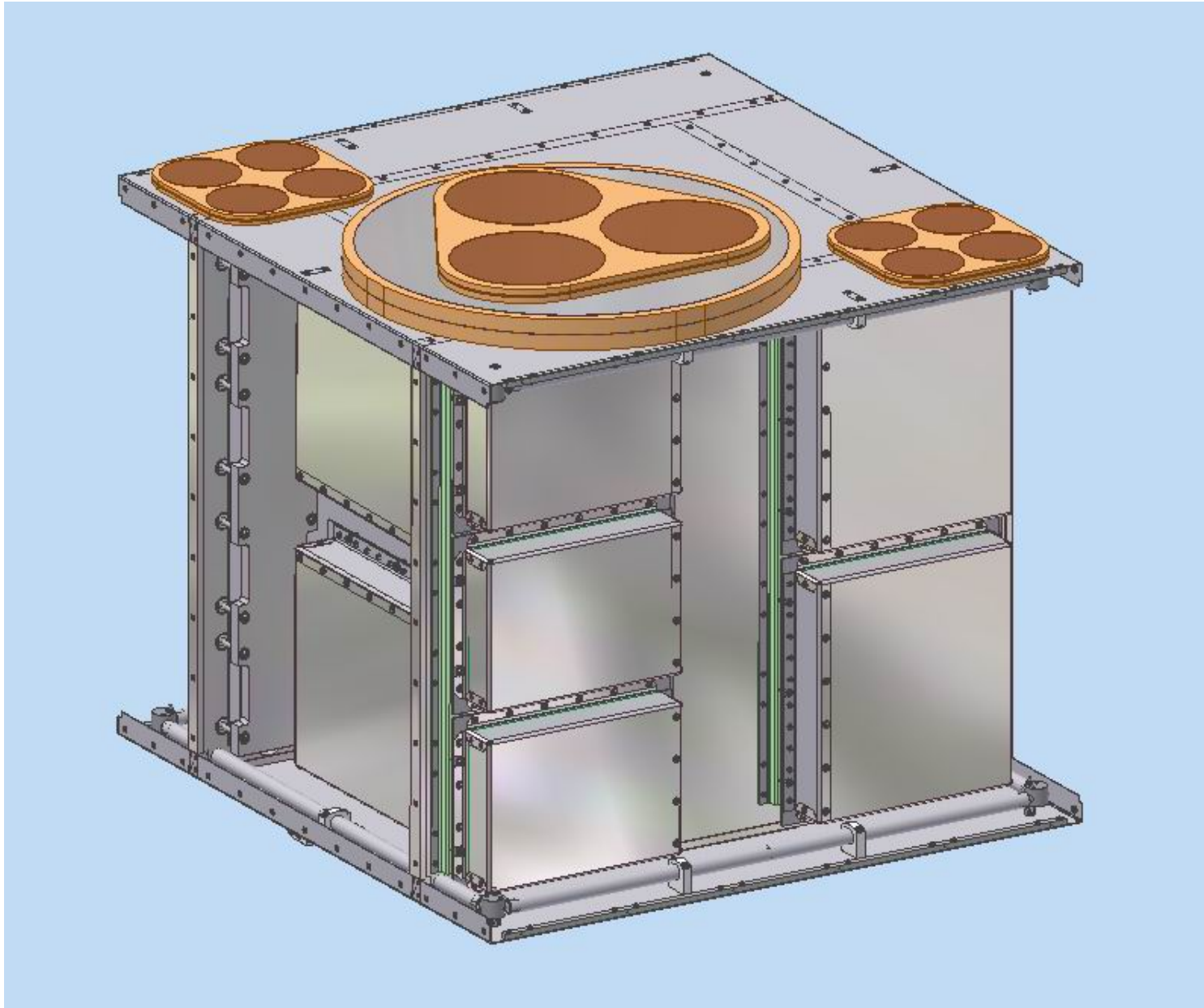


Eagle Modules

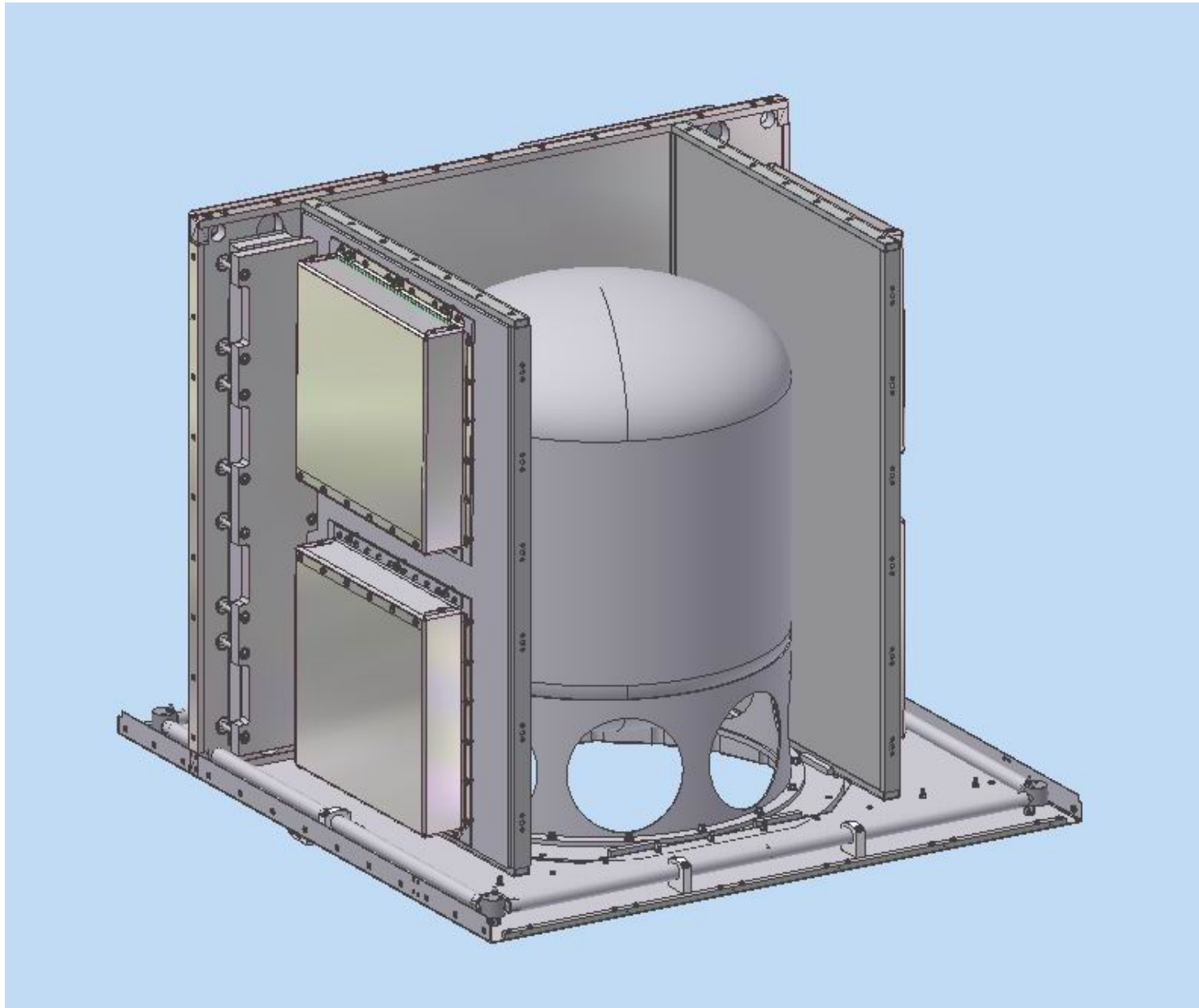
(L-R) 125x180mm, 200x180mm, 275x180mm PCB Size



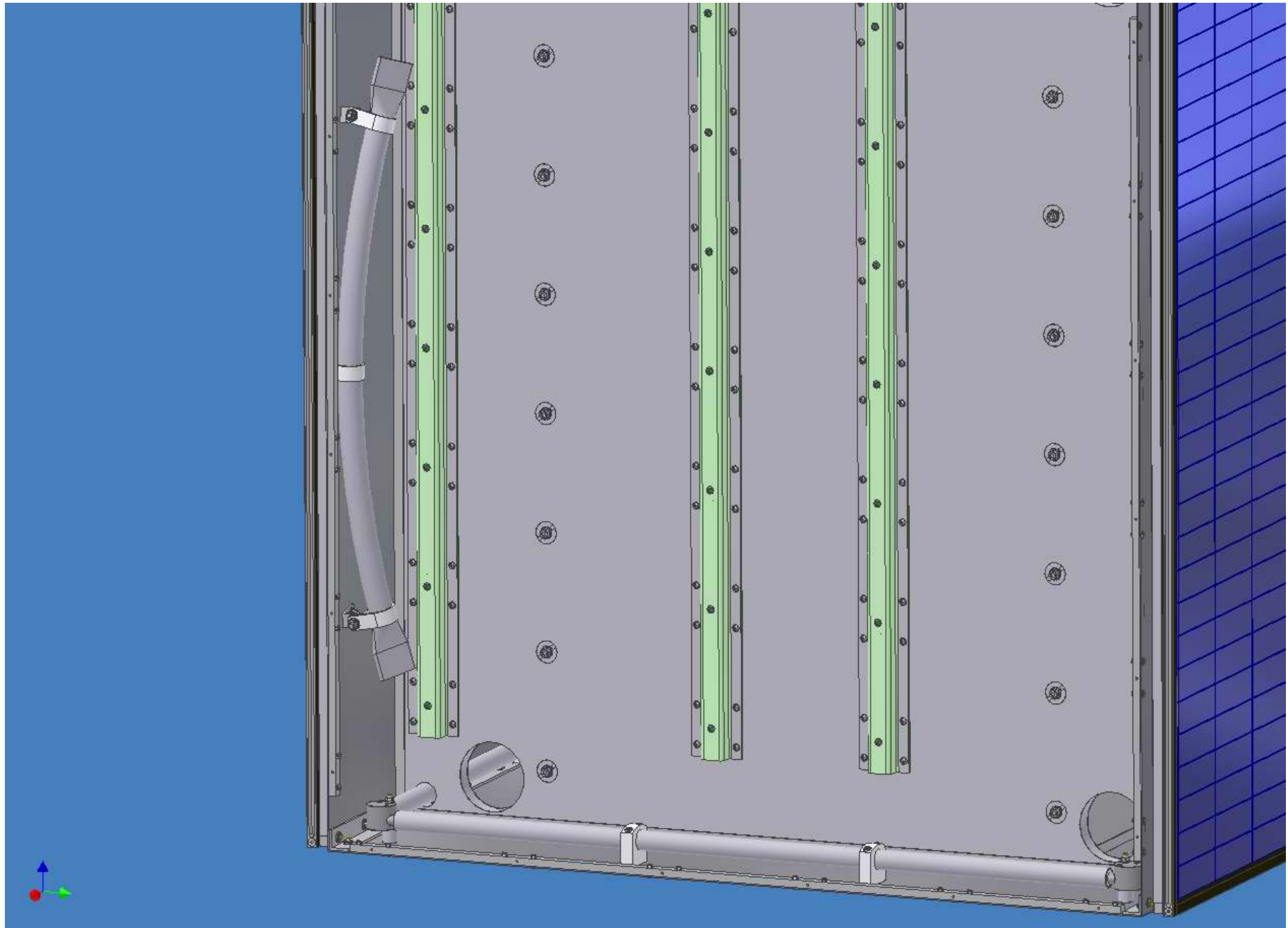
Eagle Typical Module Installation



Eagle Propellant Tank, Launch I/F Plate, Li-Ion Battery



Eagle Nutation Damper, 1 of 2; Torque Rod Ring, 1 of 2



Eagle Thermal and Power Generation Analysis

Eagle Thermal Analysis
Preliminary Design, Model: P3E Mod 2.o03

